

Serial No. 09/911,585, filed July 24, 2001  
Docket No. 1140668-0026  
Page 3 of 17

**Amendments to the Claims**

**The following listing of claims will replace all prior versions and listing of claims in the application.**

18. (currently amended) A method for programming motion controllers, wherein graphical elements, comprising control structures and function blocks, are linked using a graphical editor to form a motion control flowchart represented on a display device, comprising the steps of: providing a plurality of structured text subprograms; and ~~converting based on~~ the structured text subprograms to generating a plurality of corresponding graphical elements comprising function interfaces corresponding to the respective structured text subprogram.
19. (currently amended) The method according to claim 18, further comprising the steps of:
- (a) generating s structured textual language from the flowchart;
  - (b) converting the structural textual language in a processor-independent pseudo-code,
  - (c) loading the processor-independent pseudo-code into the controller, and
  - (d) converting the processor-independent pseudo-code into executable processor code.
20. (previously presented) The method according to claim 18, wherein programming language commands are provided in the flowchart editor as a function of the associated hardware configuration.
21. (previously presented) The method according to claim 18, wherein the graphical elements are provided as programming language elements of the motion control flowchart.
22. (previously presented) The method according to claim 18, wherein the structured text subprograms comprise structured text according to IEC 6-1131.

Serial No. 09/911,585, filed July 24, 2001  
Docket No. 1140668-0026  
Page 4 of 17

23. (previously presented) The method according to claim 22, further comprising the step of switching between three forms of representation, the forms selected from the set consisting of structured textual language, contact plan and function plan.

24. (previously presented) The method according to claim 18, wherein at least one programming language command selected from the group consisting of loop and parallel branch programming language commands is provided in motion control flowchart notation.

25. (currently amended) ~~The method according to claim 24,~~ A method for programming motion controllers, wherein graphical elements, comprising control structures and function blocks, are linked using a graphical editor to form a motion control flowchart represented on a display device, comprising the steps of:

providing a plurality of structured text subprograms;

based on the structured text subprograms, generating a plurality of corresponding graphical elements comprising function interfaces corresponding to the respective structured text subprogram,

converting the structured text subprograms to a plurality of corresponding graphical elements comprising function interfaces corresponding to the respective structured text subprogram,

wherein at least one programming language command selected from the group consisting of loop and parallel branch programming language commands is provided in motion control flowchart notation; and

wherein a parallel branch is provided and individual commands are initiated in a given interpolator cycle within respective parallel branches.

26. (previously presented) The method according to claim 18, wherein parameters are set for the function blocks via a mask input in motion control flowchart notation.

Serial No. 09/911,585, filed July 24, 2001  
Docket No. 1140668-0026  
Page 5 of 17

27. (previously presented) The method according to claim 18, comprising the further steps of combining function blocks into modules, and representing the modules as function blocks in motion control flowchart notation.
28. (currently amended) The method according to claim 27, wherein the modules are interleaved in motion control flowchart notation.
29. (previously presented) The method according to claim 18, further comprising the step of assigning, in motion control flowchart notation, multiple variables in function blocks.
30. (previously presented) The method according to claim 18, wherein function blocks that represent functions requiring a period of time, comprise step-enabling conditions in motion control flowchart notation.
31. (previously presented) The method according to claim 18, wherein the graphic elements of the flowchart are positioned automatically.
32. (previously presented) The method according to claim 18, wherein the graphic elements of the flowchart are linked together automatically.
33. (currently amended) The method according to claim 18, wherein the flowchart is displayed in a form ~~comprising one form selected from the group consisting of an enlarged form and a reduced form~~ that can be enlarged or reduced.
34. (currently amended) The method according to claim 18, wherein ~~recompiling in~~ retranslation into motion control flowchart notation is possible by means of marks in the textual language.